REMARKS

The Office Action mailed September 24, 2007, has been received and reviewed. Claims 1 through 25 and 40 are currently pending in the application, of which claims 1 through 3, 8 through 10, 13, 20 through 25 and 40 are currently under examination. Claim 7 has been objected to as being dependent upon rejected base claims, but the indication of allowable subject matter in such claims is noted with appreciation. Claims 4 through 6, 11, 12 and 14 through 19 are withdrawn from consideration as being drawn to a non-elected invention. Claims 1 through 3, 8 through 10, 13, 20 through 25 and 40 stand rejected.

Applicants have amended claim 1, cancelled claim 40, entered new claim 41 and respectfully request reconsideration of the application in view of the amendments and in view of the arguments set forth hereinbelow.

35 U.S.C. § 102(b) Anticipation Rejections

Applicants note that two separate anticipation rejections based on Slysh (U.S. Patent No. 4,337,560) are set forth in the body of the Office Action. The first rejection is set forth on page 2 of the Office Action wherein claims 1 through 3, 8, 9, 13, 21, 25, and 40 are rejected as being anticipated by Slysh. The second rejection is set forth on page 3 of the Office Action wherein claims 1, 8 and 10 are rejected as being anticipated by Slysh. For sake of clarity and consistency, each rejection is addressed hereinbelow in the order set forth in the Office Action.

Anticipation Rejection Based on U.S. Patent No. 4,337,560 to Slysh

Claims 1 through 3, 8, 9, 13, 21, 25, and 40 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Slysh (U.S. Patent No. 4,337,560). Applicants respectfully traverse this rejection, as hereinafter set forth.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Furthermore, "[t]he fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency

of the result or characteristic." *See* MPEP 2112, summarizing *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1967 (Fed. Cir. 1993). Also, "[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *See* MPEP 2112, quoting *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original).

Independent claim 1 of the presently claimed invention is directed to a deployable truss. The deployable truss of claim 1 comprises: a plurality of column members connected at their ends to form a deployable truss that forms a rigid structure in a deployed state and that has a stowage volume less than its deployed volume in a collapsed state, wherein at least some of the plurality of column members comprise column assemblies including *at least three strut members, each strut member of an associated column assembly being connected to each other strut member of the associated column assembly at a first end of the column assembly and at a second end of the column assembly.*

The Examiner cites Slysh as showing a deployable truss comprising: "a plurality of column members (figure 14) connected at their ends to form a deployable truss that forms a rigid structure in a deployed state and that has a stowage volume less than its deployed volume in a collapsed state, at least some of the plurality of column members comprise column assemblies including a plurality of strut members (figure 14 the top and bottom parts 21), each strut member of an associated column assembly being connected to each other of the associated column assembly at a first end of the column assembly and at a second end of the column assembly (see figure 14)." (Office Action, page 2).

Applicants respectfully disagree with the Examiner's characterization of Slysh with regards to FIG. 14. Particularly, Applicants submit that FIG. 14 does not represent a plurality of column members as stated by the Examiner. The description of FIG. 14 states that it is "a perspective view of a fixed geometry strut having a hat cross section." (See Col. 3, lines 27-28, emphasis added). Furthermore, Applicants submit that Slysh does not describe "top and bottom parts 21" as stated by the Examiner, implying that such "top and bottom parts" are individual struts. Rather, Slysh describes element 21 as a single strut structure. More specifically, Slysh states that part 21 is "a fixed geometry strut" of a "generally hat-shaped cross-section" which

"tapers towards each end from a maximum cross section at strut mid point." (See Col. 6, lines 29-32).

Furthermore, Slysh refers to "both ends of the strut" rather than a plurality of struts when describing FIG. 14 (See Col. 6, line 32, emphasis added). Applicants find no description by Slysh, nor has the Examiner pointed to any specific description therein, stating that the component shown in FIG. 14 includes a plurality of struts arranged in the manner recited by claim 1 of the present invention.

Thus, Applicants submit that Slysh does not describe, either expressly or inherently, column assemblies including *at least three strut members connected to each other at a first end of the column assembly and at a second end of the column assembly*, as recited in independent claim 1. As such, applicants assert that claim 1 is not anticipated by Slysh and respectfully request that the Examiner withdraw the rejection of independent claim 1 under 35 U.S.C. § 102(b).

Applicants additionally assert that each of dependent claims 2, 3, 8, 9, 13, 21 and 25 are allowable at least because each depends from claim 1, which is allowable. Therefore, Applicants assert that claims 2, 3, 8, 9, 13, 21 and 25 are not anticipated by Slysh and respectfully request that the Examiner also withdraw the rejection of dependent claims 2, 3, 8, 9, 13, 21 and 25 under 35 U.S.C. § 102(b).

Anticipation Rejection Based on U.S. Patent No. 4,337,560 to Slysh

Claims 1, 8, and 10 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Slysh (U.S. Patent No. 4,337,560). Applicants respectfully traverse this rejection, as hereinafter set forth.

As stated above, claim 1 recites, in part, column assemblies including at least three strut members, wherein each strut member of an associated column assembly is connected to each other strut member of the associated column assembly at a first end of the column assembly and at a second end of the column assembly.

The Examiner once again cites Slysh as showing a deployable trust. In this specific rejection of claims 1, 8 and 10, the Examiner states that "Slysh (figures 5, 1-9) shows a deployable truss comprising a plurality of column members (figure 5) connected at their ends to form a deployable truss that forms a rigid structure in a deployed state and that has a stowage

volume less than its deployed volume in a collapsed state, at least some of the plurality of column members comprising column assemblies including a plurality of strut members (figure 9 shows the struts separated by the hinge and the other border at 16), each strut member of an associated column assembly being connected to each other strut member of the associated column assembly at a first end of the column assembly and at a second end of the column assembly (see figure 7)." (Office Action pages 3-4).

The Examiner gives no explanation or showing, more than "see figure 7," as to how Slysh describes "each strut member of an associated column assembly being connected to each other strut member of the associated column assembly at a first end of the column assembly and at a second end of the column assembly," as recited in claim 1. (See Office Action page 5).

FIG. 7 of Slysh shows the strut illustrated in FIG. 6 while the strut is in a compressed state. (See Col 3, line 8). The strut 12 of FIGS. 6 and 7 is formed of two conical shells joined together at their bases. (See Col. 5, lines 29-32). These two shells are not joined together at any other location. Thus, there is no connection to each other "*at a first end* of the column assembly *and at a second end* of the column assembly," as recited in claim 1.

The Examiner relies on FIG. 9 of Slysh in an effort to show a plurality of strut members. FIG. 9 illustrates sides 14 and 15 of strut 12 being attached together with a longitudinal hinge 16. (See Col. 5, lines 34-36). Applicants note, however, that FIG. 9, and its related description does not describe the connection of a *plurality* of strut members at "a first end of *the column assembly* and at a second end of *the column assembly*." FIG. 9 describes "the strut" rather than a plurality of strut members (Col. 3, line 23). Similarly, Slysh describes the component of FIG. 6 as a single strut 12 consisting of two conical shells joined together at their bases, each shell includes sides 14 and 15 hingedly coupled to one another. (Col. 5, lines 29-32, 34-36).

While one might argue that the component in FIG. 6 includes two conical struts coupled at their respective bases, such a construction still fails to anticipate claim 1 of the presently claimed invention since the two conical portions are not connected to each other at their "second ends."

Furthermore, even if one were to assume *arguendo* that FIGS. 6, 7 and 9 depicted a *plurality* of struts as asserted by the Examiner (and Applicants maintain their position to the contrary), clearly Slysh does not describe *at least three struts* coupled together in the manner

recited by claim 1 of the presently claimed invention.

Thus, Applicants submit that Slysh does not describe, either expressly or inherently, column assemblies including at least three strut members connected to each other at a first end of the column assembly and at a second end of the column assembly, as recited in independent claim 1. As such, applicants assert that claim 1 is not anticipated by Slysh and respectfully request that the Examiner withdraw the rejection of independent claim 1 under 35 U.S.C. § 102(b).

Applicants additionally assert that each of dependent claims 8 and 10 is allowable at least because such claims depend from claim 1, which is allowable. Therefore, Applicants assert that claims 8 and 10 are not anticipated by Slysh and respectfully request that the Examiner also withdraw the rejection of dependent claims 8 and 10 under 35 U.S.C. § 102(b).

Anticipation Rejection Based on U.S. Patent No. 4,557,083 to Zanardo

Claims 1 and 20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Zanardo (U.S. Patent No. 4,557,083). Applicants respectfully traverse this rejection, as hereinafter set forth.

As stated above, claim 1 recites, in part, column assemblies including at least three strut members, wherein each strut member of an associated column assembly is connected to each other strut member of the associated column assembly at a first end of the column assembly and at a second end of the column assembly.

The Examiner cites Zanardo as showing "a deployable truss comprising a plurality of column members (figure 1 shows a column member made up of two struts 8) connected at their ends to form a deployable truss that forms a rigid structure in a deployed state and that has a stowage volume less than its deployed volume in a collapsed state, at least some of the plurality of column members comprising column assemblies including a plurality of strut members (each column having two struts), each strut member of an associated column assembly being connected to each other of the associated column assembly at a first end of the column assembly and at a second end of the column assembly (through part 13)." (Office Action pages 4-5).

Zanardo describes an extensible arm in which rods 8 are connected together in their respective centers by rotary couplings. The Examiner relies on FIG. 1 to show that the rods 8 are connected to each other through parts 13. However, Applicants disagree with the Examiner's

characterization of Zanardo with respect to FIG. 1.

Considering both FIGS. 1 and 2, rods 4 are configured to constitute diagonals 13. (See Col. 2, lines 60-63). FIG. 2 illustrates that the pair of rods 8 (cited by the Examiner as being a plurality of struts) are only connected to rods 4 at a single end of each column assembly. Nowhere does the pair of rods 8 appear to be connected to the same rod 4. Nor do the rods 8 appear to be coupled to each other at both first ends and second ends of a given column assembly. Additionally, it would appear that the extensible arm would fail to close or extend as described if the rods 8 were both coupled to a common diagonal 13 as asserted by the Examiner.

Thus, Applicants submit that Slysh does not describe, either expressly or inherently, column assemblies including *at least three strut members connected to each other at a first end of the column assembly and at a second end of the column assembly*, as recited in independent claim 1. As such, Applicants assert that claim 1 is not anticipated by Slysh and respectfully request that the Examiner withdraw the rejection of independent claim 1 under 35 U.S.C. § 102(b).

As such, applicants assert that claim 1 is not anticipated by Zanardo and respectfully request that the Examiner withdraw the rejection of independent claim 1 under 35 U.S.C. § 102(b).

Applicants additionally assert that dependent claim 20 is allowable at least because it depends from claim 1, which is allowable. Therefore, Applicants assert that claim 20 is not anticipated by Zanardo and respectfully request that the Examiner also withdraw the rejection of dependent claim 20 under 35 U.S.C. § 102(b).

35 U.S.C. § 103(a) Obviousness Rejections

Obviousness Rejection Based on U.S. Patent No. 4,337,560

Claims 22 through 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Slysh (U.S. Patent No. 4,337,560). Applicants respectfully traverse this rejection, as hereinafter set forth.

To establish a *prima facie* case of obviousness the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Royka*, 490 F.2d 981, 985 (CCPA 1974); *see also* MPEP § 2143.03. Additionally, there must be "a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed. *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1742, 167 L.Ed.2d 705, 75

USLW 4289, 82 U.S.P.Q.2d 1385 (2007). Finally, to establish a *prima facie* case of obviousness there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). Furthermore, the reason that would have prompted the combination and the reasonable expectation of success must be found in the prior art, common knowledge, or the nature of the problem itself, and not based on the Applicant's disclosure. *DyStar Textilfarben GmbH & Co. Deutschland KG v. C. H. Patrick Co.*, 464 F.3d 1356, 1367 (Fed. Cir. 2006); MPEP § 2144. Underlying the obvious determination is the fact that statutorily prohibited hindsight cannot be used. *KSR*, 127 S.Ct. at 1742; *DyStar*, 464 F.3d at 1367.

An obviousness rejection for a dependent claim is proper only if the independent claim from which it depends is obvious. *See In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03. Claims 22 through 24 each depend from independent claim 1. As discussed above, Slysh fails to teach or suggest all of the limitations recited in claim 1. For example, Slysh fails to teach or suggest column assemblies including at least three strut members connected to each other at a first end of the column assembly and at a second end of the column assembly, as recited in independent claim 1. Therefore, Applicants assert that claim 1 would not have been obvious to a person of ordinary skill in the art at the time the invention was made considering Slysh.

The nonobviousness of independent claim 1 precludes a rejection of claims 22 through 24, which depend therefrom, because a dependent claim is obvious only if the independent claim from which it depends is obvious. *See In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03. Therefore, Applicants request that the Examiner withdraw the 35 U.S.C. § 103(a) obviousness rejection to claims 22 through 24.

Objections to Claim 7/Allowable Subject Matter

Claim 7 stands objected to as being dependent upon a rejected base claim, but is indicated to contain allowable subject matter and would be allowable if placed in appropriate independent form. Applicants submit that claim 7 is allowable as being dependent from an allowable base claim.

Applicants also note that new claim 41 is directed to the subject matter indicated as being allowable by the Examiner (i.e., that which was set forth in claims 1, 3, and 7 prior to the amendments set forth herein).

ENTRY OF AMENDMENTS AND NEW CLAIM

The amendments to claims 1 above should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings and do not add any new matter to the application.

New claim 41 should be entered because it is supported by the as-filed specification and drawings and do not add any new matter to the application. Additionally, as noted above, new claim 41 is directed to the subject matter indicated as allowable by the Examiner.

CONCLUSION

Claims 1 through 25 and 41 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, the Examiner is respectfully invited to contact Applicants' undersigned attorney.

Respectfully submitted,

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